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IN THE CLAIMS:

Sub D1  
1. (Amended thrice) A telephone network for a structured site, essentially of a business office type, comprising a local computer network connecting computers at the transmitting and receiving ends of the telephone network for a structural site and telephone sets connected to said telephone network to provide telephone communication between the parties at the transmitting and receiving ends through said local computer network, wherein it is provided with a computer telephony server connected to the local computer network and to a general telephone network, each telephone set is provided with an interface, each telephone set interface being connected, directly to the local computer network connecting computers, the interface being capable of converting analog/digital signals adapted to the clock frequency of the local computer network, user call signals into addresses of other interfaces connected to said local computer network, and hang-up signals.

Sub D1  
C2  
9. (Amended twice) A telephone network for a structured site, essentially of a business office type, comprising a local computer network connecting computers at the transmitting and receiving ends of the telephone network for a structured site and telephone sets to provide telephone communication between the parties at the transmitting and receiving ends through said local computer network, each said telephone set being provided with an interface, each telephone set interface being connected, directly to the local computer network, the interface being capable of converting analog/digital signals adapted to the clock frequency of the local computer

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D1  
e2  
network, user call signals into addresses of other interface connected to said local  
computer network, and hang-up signals.

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The official action has been carefully considered and the Examiners' comments are duly noted. Reconsideration of this application in light of the Examiners' comments is respectfully solicited.

Our check in the amount of \$55.00 is enclosed to cover a one-month extension to March 20, 2003, for small entity.

For paragraph 1, the Examiner is correct that this application is a Request For Continued Examination under 37CFR1.114.

For paragraph 2, the claims under consideration are those submitted in the amendment filed August 22, 2002. Turning to now more specifically to paragraphs 3 and 4 of the official action and the Examiners' rejection of claims 1-4 and 9-12. The terminology objected to in claim 1 has been clarified. For this purpose, "system" has been removed and "telephone network for a structured site" has been inserted. With respect to "local network", this has been changed to "local computer network".

With respect to claims 2, 3 and 4, these claims have been reviewed and they are free of the objections raised by the Examiner.

Turning now to claim 9, this claim has been amended twice and has been amended in a manner similar to the amendment of claim 1 and therefore claim 9 is free of these objections.

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Claims 10 – 12 have been reviewed, and these claims are also free of the objections noted by the Examiner.

With respect to paragraph 5, line 13 of former claim 1 has been amended so as to call for “local computer network”.

Therefore, all of the formal objections noted by the Examiner have been taken care of. If there are any other points outstanding the Examiner is respectfully asked to call applicants’ attorney in order to do what is necessary to take care of such objections.

Turning now more specifically to paragraphs 6 and 7 of the official action in which claims 1-12 were rejected under 35 U.S.C.103 (a) as being unpatentable over Frantz, U.S. Patent 6,167,043 in view of the prior art admitted by applicant, RU Patent 2,105,425 – Skigin et al. The Examiners’ attention is directed to column 3 lines 1-6 of Frantz which discloses the connection of telephone sets and computers to the internal telephone line and not to the local computer network.

With respect to interfaces 14 and 20, these are not adapter units for the local computer network but the office SOHO (small-office/home-office) PBX (private branch exchange) parts. See column 4, line 53-56. Their connection is made not to the local computer network, but to the internal telephone lines.

With respect to column 3 lines 1-6 in which Frantz discloses the connection of telephone sets and computers not to the local computer network as shown in the description and drawings, but to the “internal telephone line”.

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Interfaces 14 and 20 are not adapter units for the local computer network, but the office SOHO (small-office/home-office) PBX (private branch exchange) parts. (column 4, lines 53-56). Their connection is made not to the local computer network, but to the internal telephone lines.

Note, with respect to col. 5, line 21 to col. 7 line 60 which sets forth this PC circuit modulates the work of all signals of a telephone set. Through the PC-circuit and the I/O serial port, the computer is connected not to the local computer network, but to the internal telephone line (col. 3 line 32-34).

Reference is made to col. 3 line 26-30 & col. 5, line 1-6. It is pointed out that the connection of computer 13 with PSTN (public switched telephone network) is made with the help of modem 9, and further it is connected to internet through one of ISP (internet service providers) 2 and this is a common and well-known mode of connection of computer to the internet. However such a connection does not allow a realization of the connection with a telephone set, which is connected to the internal telephone network through the adapter 14. This is what was stated in column 5 line 7.

The functions of adapter units 14 and 20 (see col.3, lines 19-25) are in frequency modulation (FM) and demodulation of signals for each telephone set to its frequency channel. Also the adapter units modulate the PSTN functions, call and tone signals and allow the telephones to function normally. Thus adapter units 14 and 20 function as a PBX, in which each telephone transmits the signals to the internal line in its own frequency range. Accordingly the arrangement of PBX *on* one internal line is made by the means of simple frequency compression of signals in it (the principle of frequency division).

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Reference is made to col. 5 lines 18-20, lines 37-43, and it should be noted that the computer doesn't interoperate within the framework of the local computer network protocol, but actually it controls the work of SOHO PBX (18-20), giving through the subsequent port RS232 and circuit 10 signals of initialization of call in PBX or an answer to the call from telephones 16 and 21, incoming at various frequencies.

The Frantz's device 3 is not a router, which supports the transmittance of traffic in IP-network, but the voice *bridge* between the PSTN and IP-network. Thus the device doesn't control the traffic of *packets* in the network, but simply converts the voice signals into the current of IP-*packets* and backward. It allows the subscribers of PSTN including the subscribers of SOHO PBX to make connection to the subscribers of other PSTN networks (see drawings). In our case the *communication* of the network for a structured site with networks for other remote structured sites is done without converting voice through the voice bridge.

With respect to Kikinis, which was cited but not applied to any claims, it should be noted that it is not pertinent to the subject matter as claimed. What is described is connected with the IP protocol while the local computer networks can be organized either on the basis of other protocols.

The concepts "IP-phone" and "IP-SW" are considered by the author as common and well known. In fact, even presently, it is not so. One can find several various definitions of these concepts in literature. The author uses them as a baseline and well known and does not make the separate definition.

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The arrangement of communication between the connection network for a structured site and another remote structured site is not shown, i.e. the possibility of organization of such a connection doesn't follow from the description.

Stovall, which was cited, but not applied to any claim, does not render the present invention unpatentable.

Interface to the local digital network is substantially described, which converts the PSTN signals into the signals of local network and vice versa.

The interface is done not in the way the claimed adapter unit does, but on the base of a microprocessor and the algorithm realized in a program.

The connection of the network with the PSTN is made not through the computer telephony server, as was filed, but through the separate outputs of telephone sets, i.e. in fact two networks will be working simultaneously in the office – the computer network and the PSTN network.

The communication of connection network for a structured site with the connection network for a remote structured site is not considered and not shown, i.e. the proposed solution does not allow to create the allocated communication network because the admissible length of the local computer network is limited.

With respect to Foley, the telephones are not connected to the local computer network through the adapter units but are added in through the UTP wiring device to the device of *access* (possibly modem in the central office, ADSL device, radio channel etc.) UTP – unshielded twisted pair wiring.

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The computers are connected between each other through the local computer network, however the computer is connected to the PSTN by a common manner – through a modem.

The communication between the main office and the residential office is based in fact on the technology of a known modem connection “computer-computer” and on a common telephone connection “telephone-PBX” through a device of a remote access which multiplexes these signals. Thus the residential and the main office have not one, but two working networks – computer local network and the telephone network. In the proposed case there is a single network that functions as the local computer network and as the telephone network. The communication between the main office and the remote one is also based on the technology of connection of one network and not two.

Skigin et al, RU Patent 2.105.425, is an example of a structured site telephone network, and does disclose an analog to digital converter at the transmitting end of the system, and digital to analog converter at the receiving end of the system, and was acknowledged as a prior art telephone network. However the system while very good is quite expensive since it requires additional firmware as the number of users increase, and does not meet the structural features of the claims.

The present invention provides for the direct transmission of voice messages within the framework of a structured local site.

The features and structure set forth in the independent claims are interrelated and essential to each other.

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Therefore, it is clear that no combination of the references of record regardless of how combined teach that the interface is capable of converting the analog /digital signals adapted to the clock frequency of the local computer network, and user call signals into addresses of other interfaces connected to the local computer network and hang up signals. There is no motivation in any of the references of record as to how they may be combined to arrive at the claimed inventions.

As noted in the last paragraph of page 6 of the specifications the interface design to connect a users telephone set to a local computer network bus in establishing connection between the telephone set and the network allows user calls to be switched without requiring a specialized device at the central telephone office. It is not the conversional analog to digital, which Frantz does not teach but that each telephone set is provided with an interface, and moreover Skigin also does not teach this feature. Therefore, no combination of Frantz and Skigin renders the subject matter of the claims unpatentable.

With respect to claim 9, this claim was amended in the same manner as claim 1, and the same arguments for patentability apply to claim 9.

With respect to claim 2 and claims 6 and 12 reference is made to comments supra with respect to column 3, lines 26 to 30, and column 5, lines 1 to 6, it is the internal system which allows the direct voice communications so that some of the computers are provided with software that allows direct voice communication, and therefore claim 2 is patentable overall of the references of record regardless of how combined. The same arguments apply to claims 6 and 12.



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With respect to claim 3, and claims 7 and 10, and the Examiners' reference to column 3, lines 3 to 25, there is no clear suggestion nor teaching in Frantz, as to how to modify Frantz to include the teachings of Skigin. The concept of using some of the teachings of Skigin is only found in the disclosure of this application, which is an improvement over Skigin.

With respect to the Examiners' reference to Page 3, line 30 through Page 4, line 22, the Examiner should consider the next paragraph regarding the drawbacks of Skigin, and note that claim 1 as amended includes the features which overcome the problems of Skigin. The same arguments apply to claim 7.

With respect to claim 4, and claims 8 and 11, note the comments supra with respect to column 5, lines 18 to 20 and lines 37 to 43. Further, please note that each computer is provided with an interface, not shown nor suggested by Frantz. A consideration of the portion referred to by the Examiner does not indicate specifically of a random access memory to allow exchange of digital data to be effected within the protocols. All that Frantz suggests is to integrate the PC connector with the PC13.

Claim 5 is allowable for the same reasons as claim 1. The Examiner has further made reference to column 6, lines 3 to 8. This only refers to the use of software to transmit the current IP, address and local telephone number of the internet user to the internet gateway 3. Claim 5 calls for a local commuter network to connect computers at both the transmitting and receiving ends, and that each telephone is provided with an interface. Further, there is no teaching of each successive site having an internet telephone network duplicating the internal telephone network of the first site. The local computer network at each site is provided with a router connected

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thereto as well as to a router of the local computer network of at least one other site through a channel of the computer networks of the remote structured sites.

Regarding the Examiners' comments in the conclusion, Foley has been commented on above, and applicant does not expect to amend the claims to read on Foley.

It is also noted that the Examiner considered applicants' arguments made in view of the new grounds of rejection. Since this is the first time that applicant has seen the Examiners' objections, if there are any points outstanding, the Examiner is respectfully asked to call applicants' attorney before issuing the next official actions so that applicant can consider whether any further amendments for the claims are necessary.

It should be noted that this is an RCE, which means that the applicant has paid twice to have this application examined, and in accordance with the standard Patent Office procedures, the applicant would have to pay again to have any amended claims examined. Therefore, it would be helpful to the applicant as well as applicant's attorney to advise applicant as well as applicants' attorney what further measures are necessary to place the application into condition for allowance. In effect, this official action is a final official action on the merits, and as noted, applicant would like to avoid the necessity of having to file another RCE.

As noted heretofore in the prosecution of this application, and clearly, an argument previously made with respect to the interface module 102 and 172 being connected directly to the local computer and no new reference shows or suggests this feature.

Claims 1 and 9 have been amended, and a version to show changes with markings is enclosed.

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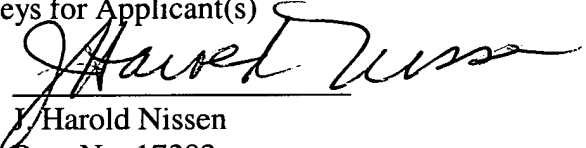
If it is necessary to change the deposit account for our funds, please call applicants' attorney to advise of such changes. If it is necessary to change this application for funds, please change deposit account 10-0100.

Early and favorable reconsideration together with the allowance of this application is respectfully solicited.

Respectfully submitted,

LACKENBACH SIEGEL, LLP  
Attorneys for Applicant(s)

BY:

  
J. Harold Nissen  
Reg. No. 17283  
Customer No. 30294

Enclosures:  
Version to show changes with markings  
Check in the amount of \$55.00